

novel process minimizes the octane loss by skeleton isomerization and by inhibiting the hydrogenation of the olefinic double bond (page 5, lines 13-16).

The catalyst used in the process of the present invention is a composition comprising:

(a) a carrier of an acid nature consisting of a silica and alumina gel, amorphous to X-rays, with a molar ratio  $\text{SiO}_2/\text{Al}_2\text{O}_3$  of 30/1 to 500/1, having the surface area ranging from 500 to 1000 $\text{m}^2/\text{g}$ , a porosity of 0.3 to 0.6 ml/g and a pore diameter within the range of 10-40 Å;

(b) a mixture of metals belonging to groups VIB and VIII deposited on the carrier in an overall quantity ranging from 2 to 67% by weight, with respect to the total of (a)+(b) (see Claim 1).

The rejection of Claims 1-18 under 35 U.S.C. §103 over Hart in view of Bellussi et al is traversed.

Hart discloses that the presence of olefins in motor gasoline is “increasingly undesirable because of their high sensitivity” (column 1, lines 22-24). Accordingly, Hart attempts to provide a new process to convert highly sensitive olefins into paraffins of low sensitivity. Hart’s method aims to saturate and to isomerize the olefins to the corresponding iso-paraffins.

Hart discloses that this method is accomplished by a combined process for the isomerization of a normal olefinic material, boiling within the gasoline range, to isoparaffins and the *simultaneous* desulfurization of a sulphur-containing hydrocarbon oil fraction (column 1, lines 14-19). Hart further discloses that the olefinic starting material is converted at an elevated temperature in the range of from 20 to 60 atm (column 5, lines 7-10), while the olefinic starting material is converted at an elevated temperature in the range of from 100 to 500°C, more especially from 250 to 400°C (column 5, lines 3-6). This combined process

comprises contacting a mixture of a normal olefinic material and a sulphur-containing hydrocarbon oil fraction, at elevated temperature and pressure, with a catalyst comprising a solid acidic isomerization catalyst on which a sulphide of a metal selected from Group VI, Group VIII and mixtures thereof is deposited (see column 4, lines 39-45 and Claim 1).

Hart further discloses that suitable carriers are compounds of silica and alumina, such as silica-alumina cracking catalysts, compounds of silica and zirconia, compounds of boron trioxide and silica, compounds of alumina and halogen, such as alumina and fluorine (column 4, lines 57-62).

However, Hart merely discloses that their catalyst composition contains a silica-alumina carrier comprising at least 60 weight percent of silica (see Claims 9-10). | ↗

Nevertheless, this reference fails to disclose any specific relationship between SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub>. In fact, the only disclosure in this reference is provided by Example 1 (column 5, lines 68-72) in which the silica-alumina catalyst contains 87% by weight of SiO<sub>2</sub> and 13% by weight of Al<sub>2</sub>O<sub>3</sub> (approximately a 7:1 ratio). Such a catalyst is clearly distinct from the claimed catalyst having a molar ratio SiO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> in carrier (a) of 30/1 to 500/1 (96.7% to 99.8%), which corresponds to a weight ratio of 17.68 to 294.65 (94.6% to 99.7%)<sup>1</sup>. | ↘

Moreover, the courts have long held that in order for a reference to be used to support a rejection “the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public” (In re Brown, 329 F.2d 1006, 1011, 141 USPQ 245, 249 (CCPA 1964) and Akzo N.V. v. International Trade Comm’n, 808 F.2d 704, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986)). Since Hart fails to provide any disclosure to support anything beyond a silica-alumina catalyst containing 87% by weight of SiO<sub>2</sub> and 13% by weight of Al<sub>2</sub>O<sub>3</sub>, Applicants submit that this reference does not enable a silica-alumina carrier

comprising at least 60 weight percent of silica. As such, Applicants submit that this reference should not be available as prior art and that the rejection should be withdrawn.

Moreover, the catalyst disclosed by Hart is fundamentally different from the catalyst of Bellussi et al, and as such there would be no motivation to use the catalyst of Bellussi et al in the process of Hart. As stated above, Hart disclose a catalyst, which is a solid acidic carrier on which a sulfide of a metal is deposited, selected from the group consisting of the metals in the left-hand column of group VI of the Periodic Table, the iron group metals of group VIII of the Periodic Table, and mixtures thereof. In contrast, Bellussi et al disclose a catalytically active silica and alumina gel (see Abstract), but provide no suggestion of a silica and alumina gel with a sulfide of a metal deposited thereon.

The requisite standard for determining obviousness is whether there is a “some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings” (MPEP §2142). Neither Hart nor Bellussi et al disclose or suggest using carrier (a) with the mixture of metals (b) in a catalytic compound as presently claimed and the attendant advantages flowing therefrom. In fact, it is the *Applicants* that disclose that the carrier (a), based on silica and alumina gel, of the present invention can be prepared as described by Bellussi et al in U.S. 5,049,536 (see page 7, line 19 of the present specification). Accordingly, Applicants kindly ask the Examiner to not use their disclosure as the guidepost to bring these two disparate references together. The question that the Examiner should ask is why would a person in the art bring these two references together when they did not have the prior benefit of *Applicant's* disclosure.

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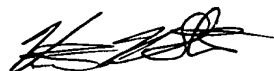
<sup>1</sup> Based on a molecular weight of SiO<sub>2</sub> of 60.085 and a molecular weight of Al<sub>2</sub>O<sub>3</sub> of 101.961.

Therefore, the combination of Hart and Bellussi et al does not support a *prima facie* case of obviousness over the present claims, and as such Applicant respectfully requests reconsideration and withdrawal of this ground of rejection.

Applicants submit that the present application is now in condition for allowance. Early notification of such action is earnestly solicited.

Respectfully submitted,

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**In re BROWN, 141 USPQ 245 (CCPA 1964)**

**In re BROWN**

**(CCPA)**

**141 USPQ 245**

**Decided Apr. 9, 1964**

**Rehearing denied June 2, 1964**

**Appl. No. 7193**

**U.S. Court of Customs and Patent Appeals**

**Headnotes**

**PATENTS**

**1. Patentability--Composition of matter (§ 51.30)**

In re Von Bramer, 53 USPQ 345, should not be construed as supporting principle which defeats novelty of chemical compound on basis of mere printed conception or contemplation of compound irrespective of fact that compound described in reference is not in existence, that there is no process shown in reference for preparing compound, or that there is no process known to person having ordinary skill in relevant art for preparing compound; that is, mere formula or sequence of letters which constitutes designation of compound is not adequate to show that applicant's compound designated by same formula or same sequence of letters is old; true test of prior art relied on to show or suggest that compound is old is whether prior art is such as to place disclosed compound in possession of public without exertion of inventive skill.

**Particular patents--Rubbers**

Brown, Low Swell, High Temperature Organosiloxane Rubbers, claims 1, 3, and 5 to 8 of application allowed.

**Case History and Disposition:**

Appeal from Board of Appeals of the Patent Office.

Application for patent of Eric D. Brown, Serial No. 594,113, filed June 27, 1956; Patent Office Group 140. From decision rejecting claims 1, 3, and 5 to 8, applicant appeals. Reversed.

**Attorneys:**

BROWN, CRITCHLOW, FLICK & PECKHAM (FULTON B. FLICK of counsel) both of Pittsburgh, Pa., for appellant.

CLARENCE W. MOORE (RAYMOND E. MARTIN of counsel) for Commissioner of Patents.

**Judge:**

Before WORLEY, Chief Judge, and RICH, MARTIN, SMITH, and ALMOND, Associate Judges.

**Opinion Text**

**Opinion By:**

MARTIN, Judge.

This appeal is from a decision of the Board of Appeals affirming the examiner's rejection of claims 1, 3 and 5 to 8

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of appellant's application serial No. 594,113, filed June 27, 1956 for Low Swell, High Temperature Organosiloxane Rubbers.

Appellant's invention relates to organosilicon elastomers "which provide a minimum swell when in contact with automotive fuels, lubricating oils and the like." Those elastomers, which are said to have tensile strengths of at least 555 p.s.i. and elongations at break of at least 100%, comprise (1) a homopolymer of a perfluoroalkyl siloxane or a copolymer <sup>1</sup> thereof with a siloxane having units of the formula R' <sub>2</sub>SiO, wherein R' may be methyl, phenyl or vinyl and (2) a filler such as titania, zinc oxide, clay or crushed quartz. The invention also relates to the unvulcanized compositions which contain, in addition to polymer (1) and filler (2), from .1 to 10 per cent by weight based on the polymer of an organic peroxide vulcanizing agent.

The following claims are representative of the appealed claims:

1. A siloxane elastomer having a tensile strength of at least 500 p.s.i. and an elongation at break of at least 100% which comprises (1) a polysiloxane in which

essentially all of the units  
Me

have the formula  $\text{RCH}_2\text{CH}_2\text{SiO}$  where R is a perfluoroalkyl radical of from 1 to 10 inclusive carbon atoms, said siloxane containing up to 10 mol per cent copolymerized siloxane units of the formula  $\text{R}'_2\text{SiO}$  where R' is selected from the group consisting of methyl, phenyl and vinyl radicals and (2) a filler.

3. A vulcanizable composition of matter comprising (1) a polysiloxane in which essentially all of the units  
Me

are of the formula  $\text{RCH}_2\text{CH}_2\text{SiO}$  where R is a perfluoroalkyl radical of from 1 to 10 inclusive carbon atoms, said siloxane containing up to 10 mol per cent copolymerized siloxane units of the formula  $\text{R}'_2\text{SiO}$  where R' is selected from the group consisting of methyl, phenyl and vinyl radicals, (2) a filler and (3) from .1 to 10 per cent by weight based on the weight of the siloxane of an organic peroxide.

Claim 1 is generic to cured or vulcanized homopolymeric elastomers as well as to the cured copolymeric elastomers. Claim 3 is similarly generic to the unvulcanized compositions. In the compositions of claims 5 to 8 a homopolymer of a perfluoroalkylsiloxane, within the scope of appealed claims 1 and 3, is recited. Four claims have been allowed.<sup>2</sup>

The reference relied on is:

Clark, Jr., Wright Air Development Agency (WADC) Technical Report 54-213,  
Dec. 7, 1954

The Clark reference discloses elastomeric compositions comprising an organosilicon elastomer, a filler and an organic peroxide vulcanizing agent. Clark's organosilicon elastomers are copolymers of a perfluoroalkylsiloxane. Those copolymers all "exhibited improved resistance to the swelling action by fuels and retained other desirable physical properties when compared to methyl silicone rubber." In discussing the organosilicon elastomers applicable, Clark states that "Attempts to prepare fluorine-containing silicone homopolymers have been unsuccessful."

The examiner rejected claims 1, 3 and 5 to 8, all of which are generic to or call for a homopolymer of a perfluoroalkylsiloxane, as unpatentable over the Clark reference. Referring to Clark's unsuccessful attempts to produce an elastomeric homopolymer of a perfluoroalkylsiloxane, the examiner viewed this teaching "as constituting a conception of the broad idea of an elastomeric homopolymer, within the scope of the language of the appealed claims" and as satisfying "the requirements" of *In re Von Bramer et al.*, 29 CCPA 1018, 127 F.2d

149, 53 USPQ 345 , in that the Clark reference "suggested" a homopolymer within the scope of the language of the appealed claims. Since the examiner considered that if any "invention" resides in the materials claimed, "such exists solely because of the specific polysiloxane [siloxane elastomer] employed since all other ingredients as herein used [in the claims] are notoriously well-known in this art," he concluded that the appealed claims do not define a patentable invention over Clark.

The examiner also rejected a contention by appellant that the Clark reference is not "a printed publication within the meaning of 35 U.S.C. 102(b)." The examiner stated that the Clark reference,

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*"unrestrictively distributed more than one year prior to the filing of the present application, to one hundred and eleven unrestricted different parties and/or organizations, is a publication under 35 U.S.C. 102(b)."*

The board, in affirming the examiner's rejection of the appealed claims on the Clark reference, stated:

\* \* \* While Clark indicates \* \* \* that the process of homopolymerizing was not successful, we agree with the examiner that the concept of homopolymer of 3,3,4,4,5,5,5-heptafluoroethyl methyl diethoxysilane is clearly disclosed. We concur in the examiner's view that the addition of a filler and vulcanizing agent to a homopolymer would be *obvious* from the disclosure \* \* \* of Clark of making similar additions to copolymers. [Emphasis ours.]

The board further agreed with the examiner that the distribution of one hundred and eleven copies of the Clark reference "constituted publication within the terms of 35 U.S.C. 102(b)."

Appellant argues that Clark's discussion of homopolymers is "at most an inchoate idea (since he could not make them) that is as remote as can be from putting the public in possession of Brown's [appellant's] invention." Appellant urges that the position of the Patent Office that it was obvious to compound appellant's homopolymers with the filler and vulcanizing agent overlooks the fact that appellant's homopolymers were novel and not obvious.

Appellant further argues that the Patent Office erred in treating the Clark reference as a printed publication under 35 U.S.C. 102(b) since it was not "legally available as a reference."

If it be assumed *arguendo* that the Clark reference is legally available as a reference, the remaining question is whether the appealed claims are obvious under 35 U.S.C. 103 in view of the Clark reference. Of course, if the answer to that question is in the negative, the issue as to whether the Clark reference is legally available as a reference becomes moot.

The crux of the examiner's rejection of the appealed claims is based on Clark's unsuccessful attempts to produce an elastomeric homopolymer within the scope of the language of the

appealed claims. The examiner, relying on the Von Bramer case, viewed that teaching as suggesting an elastomeric homopolymer within the scope of the language of the appealed claims.

[1] Apparently we are, in this case, in the field of what has come to be called the "Von Bramer doctrine."<sup>3</sup> This doctrine, which appears to have resulted from *In re Von Bramer et al.*, supra, seems over a period of years to have been tailored in some quarters to a principle which defeats the novelty of a chemical compound on the basis of a mere printed conception or a mere printed contemplation of a chemical "compound" irrespective of the fact that the so-called "compound" described in the reference is not in existence or that there is no process shown in the reference for preparing the compound, or that there is no process known to a person having ordinary skill in the relevant art for preparing the compound. In other words, a mere formula or a mere sequence of letters which constitute the designation of a "compound," is considered adequate to show that a compound in an application before the Patent Office, which compound is designated by the same formula or the same sequence of letters, is old. We do not think that the Von Bramer case should be so construed.

In *Von Bramer*, the application on appeal was directed to a motor fuel such as "cracked" gasoline stabilized against deterioration by the addition of an "N-(primaryalkyl)-aminophenol." The rejected claims were directed to a motor fuel containing, in an amount sufficient to substantially retard the deterioration, the N-(primaryalkyl)-aminophenol in which the primaryalkyl group contained at least five carbon atoms. Among the references on which the appealed claims were rejected were four patents, viz. a Clifford patent, an Atwell patent, a Gutzeit patent and a Wilson patent, all of which taught the use of aminophenolic compounds as gasoline stabilizers. Particular emphasis was placed by the Patent Office on the Clifford patent which specifically related to the retardation of the aging of deteriorable organic compositions among which was gasoline. Clifford stated that by the use of certain antioxidants the formation of gums and gummy materials was prevented. Among the antioxidants specified by Clifford were N-butyl-p-aminophenol,<sup>4</sup> N-iso

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butyl-p-amino-phenol and N-isoamyl-p-aminophenol. A method of preparing N-butyl-p-aminophenol was set out in the Clifford patent as "reacting butyl amine and p-chlorophenol in an autoclave." The appellants submitted an affidavit which purported to repeat Clifford's method of preparing the N-butyl-p-aminophenol. The examiner found that the effect of the affidavit was that the affiant could not prepare the N-butyl-p-aminophenol by the detailed method which affiant considered Clifford suggested for preparing such an aminophenol, and stated that the appellants, although they had disregarded other suggested methods for preparing aminophenols as shown by other cited patents such as the Wilson and Gutzeit patents, had deemed the affidavit adequate to establish that "one of the N primary alkyl amino phenols claimed" by appellants were available to the patentees despite the patentees' suggestion to use the same as gasoline gum inhibitors.

Appellants in the *Von Bramer* case contended that the prior art disclosed their claimed

inhibitor by nothing more than a chemical name for a then alleged unknown aminophenol and that such a disclosure of a claimed compound, no further than by the customary chemical nomenclature, was insufficient to anticipate appellants' claims. This court in disposing of appellants' contentions adopted the language of the examiner in one of his letters, in which he stated, 53 USPQ at 348:

*Applicants' argument that a name without further description given to a substance fails to identify or classify it and therefore fails to add to the prior knowledge in any way, is often true.* In the present instance a chemical compound is named by the Clifford patent, butyl amino phenol, which, while proposed to be used as a gasoline stabilizer as applicants would use it, is, according to applicants, merely a name and not a real anticipation of the very stabilizer substance applicants would use notwithstanding applicants name their stabilizer substance with the same words. This contention is predicated in the failure of applicants to prepare this N-butly [N-butyl] amino phenol by a process described by the Patentee.

*The fallacy in applicants' argument lies in the fact that the N-butyl amino phenol mentioned by the patentee is more than a mere name of an individual substance, otherwise unrecognized. This is a name according to a standard system of chemical nomenclature (Geneva system) whereby a chemically individual substance of definite chemical molecular structure is defined having generally predictable properties such as found for any similar N-alkyl amino phenol, and generally capable of synthesis by the recognized classical organic reactions.* The use of a name falling within the standard chemical system by the patentee is no accident because all of the many compounds named in Clifford's disclosure are deliberately named from this standard chemical system.

Thus it is apparent that Clifford proposes to use N-butyl amino phenol as a gasoline stabilizer and as such anticipates applicants' claims, and this is true whether Clifford never really prepared or tried this suggested stabilizer, or what he really used was something totally different, because the suggestion to use this substance as claimed is clear--even if the patentee was only guessing the effect is the same. \* \* \* [Emphasis ours.]

The court then concluded that it was not necessary that a reference patent for a chemical compound disclose an operative process for producing the compound and affirmed the examiner's rejection on the cited art.

Thus, although this court in the Von Bramer case agreed with the examiner that it is true that a name without further description given to a substance often fails to add to the prior knowledge in any way, it considered that the Clifford patent presented *more* than a *mere* name of an individual substance otherwise unrecognized. It found Clifford's disclosure a teaching of a definite chemical molecular structure having generally predictable properties "such as found for any similar N-alkyl amino phenol, and generally capable of synthesis by the recognized classical organic reactions."

To the extent that anyone may draw an inference from the Von Bramer case that the *mere* printed conception or the *mere* printed contemplation which constitutes the designation of a "compound" is sufficient to show that such a compound is old, regardless of whether the compound is involved in a 35 U.S.C. 102 or 35 U.S.C. 103 rejection, <sup>5</sup> we totally disagree. <sup>6</sup> Carrying such proposition to

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the extreme could, we think, result in a holding that a reference reciting the mere desirability of producing thousands of specifically named compounds without anything else is adequate to show that such compounds are old. We do not think that the Von Bramer case was intended to be carried to such an extreme.

We think, rather, that the true test of any prior art relied on to show or suggest that a chemical compound is old, is whether the prior art is such as to place the disclosed "compound" in the possession of the public. In *re Le Grice*, 49 CCPA 1124, 301 F.2d 929, 133 USPQ 365 ; *E. I. du Pont de Nemours & Co. v. Ladd*, 328 F.2d 547, 140 USPQ 297 (D.C. Cir. 1964).

Applying the above test to the facts before us, we do not think that Clark's reference to his unsuccessful attempts to prepare fluorine-containing silicone homopolymers would place such homopolymers in the possession of the public and as a corollary would place appellant's invention in possession of the public. <sup>7</sup> As Robinson <sup>8</sup> in 1890 said in section 330 entitled "Prior Publication: Publication must Fully Communicate the Invention to the Public":

Finally, the description must place the invention in the possession of the public as fully as if the art or instrument itself had been practically and publicly employed. In order to accomplish this, it must be so particular and definite that from it alone, without experiment or the exertion of his own inventive skill, any person versed in the art to which it appertains could construct and use it.

Certainly it cannot be said that the disclosure in the Clark reference is such that it would, without the exertion of another's own "inventive" skill, place appellant's invention in the possession of the public.

Since we have found that the appealed claims are patentable over the Clark reference, as stated previously, it is unnecessary to consider whether the Clark reference is legally available as a reference.

For the foregoing reasons the decision of the board is *reversed*.

### Footnotes

Footnote 1. Webster's Third New International Dictionary indicates that a "homopolymer" is a polymer containing only units of one single monomer while a "copolymer" is a polymer

containing units of two or more different monomers.

Footnote 2. In the allowed claims the polymeric material is *limited* to a copolymeric siloxane in which not more than 10 mol per cent of  $R_2SiO$  units are present. The board, in allowing such claims, stated "Appellant argues and the argument appears to be supported by the specification as filed, that the claimed proportions of monomers result in a copolymer having a relatively low swelling characteristic."

Footnote 3. In this connection, see Levy, "Von Bramer, A Plea for Reorientation" 33 J.P.O.S. 401-427 (1951).

Footnote 4. Although the appellants' claims were restricted to a N-(primaryalkyl)-aminophenol in which the primaryalkyl group contained at least *five* carbon atoms while the Clifford patent showed a N-(primaryalkyl)-aminophenol, viz. N-butyl-p-aminophenol, in which the primaryalkyl group contained *four* carbon atoms, the court considered the record to show that such a difference was one of degree only and did not of itself lend patentability to appellants' claims.

Footnote 5. At the oral hearing, the solicitor attempted to distinguish the rejection in this case on the basis that it was predicated on 35 U.S.C. 103 and not on 35 U.S.C. 102.

Footnote 6. In Phillips Petroleum Co. v. Ladd, 219 F.Supp. 366, 138 USPQ 421, a case decided July 25, 1963 in the District Court of the District of Columbia, a reference stated that a polybutadiene containing 100% cis, 1,4- or trans 1,4- addition cannot be made at any practical temperature. The rejection of the claims upon that reference was based on the contention that since 100% cis is mentioned, the publication was such a disclosure as to deny patentability, the Commissioner relying principally upon the Von Bramer case. In the Phillips case Judge Jackson, who spoke for this court in the Von Bramer case, stated ( 138 USPQ at 423-424) that

\* \* \* the Von Bramer case differs in its facts from the instant [Phillips] case. In that case, as maintained by counsel for plaintiff, the prior art disclosure was what is known as the "Geneva" name of a chemical compound defining molecular structure. The properties claimed in the Von Bramer case differed only in degree from those admittedly disclosed in the prior art. *As far as the predictable properties of the Von Bramer case is concerned, they were found in any similar compound and those compounds were capable of synthesis by recognized classical organic reactions.*

*Furthermore, in that case there were statements in a number of prior art references that the compound relied upon as anticipatory had been made and used, and that the five carbon atom alkyl limitation in that case contradicted the statement of the invention in the specification as an arbitrary and meaningless distinction from the prior art. [Emphasis ours.]*

Footnote 7. The examiner has stated that if any "invention" is present in the instant application it exists solely because of the specific polymer, i.e., the copolymer or homopolymer, employed. The board further found that appellant's copolymers are patentably distinct from the copolymers

recited in the Clark reference (see Footnote 2).

Footnote 8. I Robinson on Patents 451 (1890).

**- End of Case -**

Akzo N.V. v. U.S. International Trade Commission (CA FC) 1 USPQ2d 1241

**Akzo N.V. v. U.S. International Trade Commission**

**U.S. Court of Appeals Federal Circuit  
1 USPQ2d 1241**

**Decided December 22, 1986  
No. 86-877**

**Headnotes**

**PATENTS**

**1. Patentability/Validity -- Anticipation -- Prior art (§ 115.0703)**

U.S. International Trade Commission did not use impermissible "ipsissimus verbis" test in finding that claimed process for making aramid fibers was not anticipated, but rather properly found that prior art did not disclose such process to one of ordinary skill in art and that prior art reference that called for use of sulfuric acid did not call for use of 98 percent concentration critical to success of claimed process, since "concentrated sulfuric acid" is not inherently 98 percent sulfuric acid to one skilled in art.

**2. U.S. International Trade Commission -- In general (§ 115.01)**

International Trade Commission's administrative protective order which permitted access, to confidential business information produced during discovery phase of investigation, by both parties' outside counsel, but not by management personnel or in-house counsel of either company was proper, since order did unilaterally immunize purportedly confidential documents from scrutiny of party challenging order, since order provided mechanism by which either party was free to object to designation of information as confidential, and since party challenging order

failed to prove need for access to such information, nor harm to it from nondisclosure.

### **3. U.S. International Trade Commission -- Burden of proof (§ 115.05)**

International Trade Commission did not err in determining that unlawful importation of infringing aramid fibers violated Tariff Act's Section 337, 19 USC 1337, based upon its finding, supported by substantial evidence, that such importation will have tendency to injure domestic industry, despite evidence that domestic industry's profits from sale of fibers will increase notwithstanding such entry into market, since issue under Section 337 is not whether domestic industry profits will increase beyond current levels but whether importer's presence in market will substantially injure domestic industry's business during remaining life of patent.

### **4. U.S. International Trade Commission -- Jurisdiction (§ 115.03)**

International Trade Commission proceeding under Tariff Act's Section 337, 19 USC 1337, is not "inherently judicial" proceeding that must be adjudicated only by Constitution's Article III courts, even though private rights may be affected by Section 337 proceedings, since main thrust of Section 337 is to protect public interest from unfair trade practices in international commerce, and since Section 337 represents valid delegation of broad congressional power to achieve such purpose.

## **Case History and Disposition:**

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Appeal from U.S. International Trade Commission.

U.S. International Trade Commission investigation on behalf of E.I. du Pont de Nemours and Co., for exclusion of certain aramid fibers covered by U.S. patent, in which Akzo N.V., Enka B.V., Aramide Maatschappij v.o.f., and Akzona Incorporated, were designated as respondents. From exclusion order prohibiting importation, respondents appeal. Affirmed.

### **Attorneys:**

Denis McInerney, and Cahill Gordon & Reindel, both of New York, N.Y., C. Frederick Leydig, and Leydig, Voit & Mayer Ltd., both of Chicago, Ill., and Tom M. Schaumburg, Cecilia

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H. Gonzalez, and Plaia & Schaumberg, Chartered, all of Washington, D.C. (David R. Hyde, Laurence T. Sorkin, George Wailand, P. Kevin Castel, Charles S. Oslakovic, John Kilyk, Jr., Norval B. Galloway, and Robert H. Falk, and Hubbard, Thurman, Turner & Tucker, both of Dallas, Texas, on the brief), for appellants.

Catherine Field, Office of the General Counsel, U.S. International Trade Commission (Michael P. Mabile, assistant general counsel, on the brief), for appellee.

Daniel M. Gribbon, and Covington & Burling, both of Washington, D.C., Joseph M. Fitzpatrick, and Fitzpatrick, Cella, Harper & Scinto, both of New York, N.Y. (Harris Weinstein, James R. Atwood, Eugene D. Gulland, Dwight C. Smith, III, and Stephen H. Marcus, and John A. O'Brien, Henry J. Renk, Charles P. Baker, Laura A. Bauer, and Bruce C. Haas, on the brief), for intervenor-appellee E.I. du Pont de Nemours.

**Judge:**

Before Markey, Chief Judge, and Davis and Nies, Circuit Judges.

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**Opinion Text**

**Opinion By:**

Davis, Circuit Judge.

This is an appeal by Akzo, N.V., Enka B.V., Aramide Maatschappij v.o.f. and Akzona Inc. (appellants or Akzo) from an exclusion order by the United States International Trade Commission (Commission or trial tribunal) pursuant to §§337 and 337a of the Tariff Act of 1930, 19 U.S.C. §§1337, 1337a (1982), prohibiting the importation into the United States of aramid fibers manufactured by Akzo in the Netherlands. We affirm.

**I. Background; Issues; Scope of Review**

*A. Background.* On April 18, 1984, E.I. du Pont de Nemours and Company (appellee or Du Pont) filed a complaint with the Commission under §337 of the Tariff Act of 1930 (19 U.S.C. §1337). 1 The complaint alleged that Akzo had engaged in unfair methods of competition and unfair acts including the importation, sale and marketing in the United States of certain aramid fibers. 2 produced in the Netherlands by a process purportedly covered by the claims of Du Pont's U.S. Letters Patent No. 3,767,756 (the Blades or '756 patent). In addition, the complaint charged Akzo with attempting both to exploit applications of aramid fibers and to penetrate markets for aramid fibers created by Du Pont. Finally, the complaint alleged that the effect or tendency of

the unfair methods of competition and unfair acts was to destroy or substantially injure an industry, efficiently and economically operated, in the United States.

After evaluating Du Pont's complaint, the Commission instituted an investigation pursuant to §337(b), 19 U.S.C. §1337(b), and an administrative law judge (ALJ) was assigned to preside over the investigation.

The major substantive question before the ALJ (and now before us) is the validity and enforceability of Du Pont's Blades patent. Those issues, and the related facts and circumstances, are set forth and discussed in Part II, *infra*. The major procedural issue is whether Akzo was denied due process because Du Pont's confidential documents were not disclosed to appellants' management. This problem (together with an alleged violation of treaty rights) is considered in Part III, *infra*. The other issues presented to us are dealt with in Part IV, *infra*.

Following 14 days of hearing the ALJ issued an initial determination holding that there was a violation of §337(a) of the Tariff Act of 1930 in the unlawful importation or sale of certain aramid fibers produced overseas by means of a process that if practiced in the United States would infringe the Blades '756 patent, and that importation has the tendency to injure substantially an efficiently and economically operated industry in the United States.

Akzo filed a petition for review of the ALJ's initial determination on June 3, 1985. On July 15, 1985, the Commission decided to review only those portions of the initial determination pertaining to anticipation and obviousness of the Blades '756 patent under 35 U.S.C. §§102 and 103. Ultimately, the Commission affirmed the ALJ's findings and conclusions on anticipation and obviousness and determined that appellants had failed to prove the Blades '756 patent invalid. Having decided not to review the remainder of the initial determination, the Commission concluded that there was a violation of §337. Accordingly, on November 25, 1985, the Commission, after further consideration, entered an exclusion order limited to certain forms of aramid fibers produced by Akzo. The Commission's order became final on January 25, 1986 when the President declined to overrule it pursuant to §337(g).

B. *Issues*. On this appeal, Akzo raises a number of issues for us to resolve:

(1) whether the Commission's finding that claim 13 of the '756 patent was "not invalid" and "not unenforceable" is supported by substantial evidence; 3

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(2) whether Akzo's due process and treaty rights were violated in the Commission proceeding;

(3) whether the Commission, as a non-Article III tribunal, is constitutionally prohibited from adjudicating the validity and enforceability of patents;

(4) whether the Commission's finding that Akzo's sales of aramid fibers in the United States would have a tendency to "destroy or substantially injure" an industry economically and efficiently operated is supported by substantial evidence;

(5) whether the Commission's conclusion that Du Pont's value-in-use pricing did not violate the antitrust laws is correct and supported by substantial evidence; and

(6) whether it is a defense to Du Pont's complaint that Du Pont employed a solvent included in a polymerization process patented by Akzo.

C. *Scope of review*. This court defined our scope of review in cases appealed from the Commission in *Beloit Corp. v. Valmet OY*, (Order), 742 F.2d 1421, 223 USPQ 193 (1984), *cert. denied*, 105 S. Ct. 2706, 86 L. Ed. 2d 721 (1985). There we held that the court "does not sit to review what the Commission has not decided." 742 F.2d at 1423, 223 USPQ at 194. *Beloit* is distinguishable from this case because there the Commission specifically adopted only a portion of the presiding official's initial decision. See, e.g., *American Hospital Supply Corp. v. Travenol Laboratories, Inc.*, 745 F.2d 1, 5 n.13, 223 USPQ 577, 580 n.13 (Fed. Cir. 1984). In contrast, in the current case, the Commission merely determined not to review the remainder of the initial decision, choosing to conduct its own §§102 and 103 analysis. The Commission neither rejected any part of the initial determination nor did it say that it was taking no position on any part of it. Although the Commission limited its own review to patent validity under §§102 and 103, the fact that it affirmed the conclusion of the ALJ that there as a §337 violation makes reviewable those conclusions of the ALJ necessary for the Commission to have determined (as it did) that there was a §337 violation. *Accord Warner Brothers, Inc. v. U.S. International Trade Commission*, 787 F.2d 562, 229 USPQ 126 (Fed. Cir. 1986). This includes not only the §§102 and 103 issues of anticipation and obviousness, but also whether there was inequitable conduct before the Patent Office and the other issues decided by the Commission and the ALJ. 4

## **II. Validity and Enforceability of the Blades Patent**

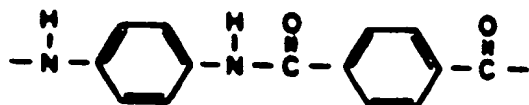
A. *The Invention*. 5 The Blades '756 patent, "Dry-Jet Wet Spinning Process," was issued on October 23, 1973 to Dr. Herbert Blades and immediately assigned to Du Pont. The patent describes a method that produces a high strength synthetic polyamide 6 fiber which Du Pont has marketed under the trade name Kevlar. This fiber has an extraordinary as-spun strength, five times stronger pound for pound than steel, as well as a modulus (stretch resistance) equal to glass, eight times as high as industrial grade polyester, and twenty-five times as high as industrial nylon. Kevlar is also much more heat resistant than industrial-grade nylon or polyester. These extraordinary physical properties, as well as Kevlar's light weight and rustproof character, have enabled Du Pont to market it for use in a variety of applications including, but not limited to, roping, spacecraft and airplane parts, bullet resistant clothing and armor, tires, and boat hulls. Depending upon its use, Kevlar has been used as a substitute for steel, aluminum, asbestos, nylon, rayon, polyester, cotton, or cotton fiber. Kevlar is available as either a continuous rope or filament, or alternatively as a staple or pulp. Staple consists of short filaments which can be spun

into yarn. Pulp is ground fiber most often used as an asbestos substitute.

The procedure by which the synthetic fiber is manufactured involves dry spinning polyamides from coagulation solutions called dopes. In dry spinning, a specialized filter called a spinneret is placed a short distance from a bath of spinning dope that is extruded through a layer of gas and into an aqueous

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coagulation bath. 7 The dope used in the Blades '756 patent consists of para-positioned aromatic polyamides dissolved in highly concentrated sulfuric acid and heated to around 100°C. The polyamide used is a high molecular weight poly(p-phenylene terephthalamide) (PPD-T).



The high molecular weight of the polyamide results in a high inherent viscosity 8 of approximately 4.4% when 20% PPD-T by weight is dissolved in approximately 100% sulfuric acid.

In 1969 Dr. Blades, one of Du Pont's research scientists, began to develop and conduct experiments aimed at producing a high-strength synthetic fiber. Blades exclusively employed a wet-spinning method in his early work, using PPD-T as well as other polymers. This early work had minimal success. Although the dry-spinning method was known by Du Pont scientists, a 1966 report indicated that the low solubility of PPD-T precluded use of the dry-spinning technique. In 1969, Du Pont's Dr. Peter Boettcher suggested to Blades that dry spinning might improve the end-results by influencing coagulation. Dr. Boettcher had learned about dry spinning from a Monsanto Morgan patent (Morgan '645 patent).

Blades' early experimentation with the dry-spinning process did not yield fiber with an increased tenacity despite the fact that dry spinning was known to improve fiber tenacity using other dopes. Blades' initial conclusion was that dry spinning would be unsuccessful with PPD-T. Nevertheless, he continued experimenting with the dry-spinning process, and, at his supervisor's suggestion, began using sulfuric acid as a solvent. Blades also redesigned and built a mixing device because of some difficulties he encountered mixing PPD-T with the sulfuric acid. Sulfuric acid was not an evident candidate as a solvent because it was known to react with the polymer and become degraded at high temperatures. Blades discovered, however, that he could produce an improved fiber using 10.2% polyamide in about 100% sulfuric acid. Under this system he found that there was no difference in tensile strength of the fiber using a wet-spun or dry-spun method. PPD-T was a somewhat unusual choice of polymer for this work because of its characteristic rigidity caused by the placement of para-oriented aromatic rings in the chain. The para-positioning of the aromatic rings makes the polyamide much less soluble than analogous meta-positioned rings. But the fact is that, while meta-positioned polymers generally

form only isotropic solutions, para-positioned polymers of Blades' invention form anisotropic solutions 9 at high concentrations.

In subsequent trials, Blades increased the concentration of PPD-T and obtained a significantly improved fiber, especially using the dry-spinning method. When the system was operated at room temperature, however, he found that undissolved polyamide clogged up the holes of the spinneret. He therefore heated the dope at these higher concentrations to dissolve all the polyamide and keep the system above the melting point. To his surprise, Blades discovered that there was little or no degradation of the polyamide at high temperatures. He explained this unexpected absence of degradation by theorizing that, when the system contains high concentrations of PPD-T, the sulfuric acid binds to the polymer and chemically deactivates it.

After numerous trials, Blades found that an optional fiber could be produced using PPD-T of 4.4 inherent viscosity at a 20% concentration in approximately 100% sulfuric acid. The dope was then heated to 95°C and dry spinning was then carried out at about 100°C. The resultant fiber had a tenacity of approximately two times that of previous experimental fibers.

In April 1971, Blades filed an application with the PTO claiming the method of making these aramid fibers. the initial application and two subsequent applications were rejected in large part on the basis of anticipation by the Morgan '645 and the Kwolek '542 patents which Du Pont had brought to the attention of the examiner. Initially the

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examiner also rejected the application under 35 U.S.C. §103. Blades, however, was able to overcome the examiner's objections, and on May 2, 1973, the PTO gave notice of allowance of the Blades '756 patent. Blades assigned the patent rights to Du Pont.

B. *Validity*. Claim 13, the narrowest claim, is the only claim involved on this appeal. 10 Akzo says that that claim is invalid under 35 U.S.C. §§ 102 and 103. More specifically, Akzo argues that the Commission misconstrued the legal standard of anticipation and therefore erroneously held that the Blades '756 patent was not anticipated. In addition, appellants argue that the Commission failed properly to evaluate the prior art in determining obviousness *vel non*. Of course, it goes without elaboration that the Blades '756 patent enjoys a presumption of validity under 35 U.S.C. §282.

[1] As we have said, Akzo challenges the Commission's use of §102, claiming that that tribunal misinterpreted the legal standard of anticipation. Under 35 U.S.C. § 102, anticipation requires that each and every element of the claimed invention be disclosed in a prior art reference. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). In addition, the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public. *In re Brown*, 329 F.2d 1006, 1011, 141 USPQ 245, 249 (CCPA 1964). Akzo asserts, however, that the Commission wrongly used an "*ipsissimis verbis* test" in reaching its conclusion that the Blades '756 patent was not anticipated by the Morgan '645 disclosure. 11 We do not read the

Commission's opinion as requiring such an " *ipsissimis verbis* test." Rather, we understand that opinion as simply finding that the prior art reference did not disclose, to one of ordinary skill in the art, 12 the process for making the aramid fibers described in claim 13. The Commission noted that while the Morgan '645 patent called for the use of sulfuric acid, it did not call for the use of at least 98% concentrated sulfuric acid which was critical for the success of the Blades process. The Commission also concurred with the ALJ and found that concentrated sulfuric acid is not inherently 98% sulfuric acid to one skilled in the art.

Because we determine that the Commission did not use an incorrect legal standard under §102, we are bound to accept its and the ALJ's factual findings if supported by substantial evidence. 5 U.S.C. §706 (1982). As appellants themselves point out, anticipation under §102 is a factual determination. *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). We must conclude that there is substantial evidence in the record supporting the Commission's conclusion that claim 13 of the Blades '756 patent was not anticipated by the prior art. As the Supreme Court noted in *Universal Camera v. NLRB*, 350 U.S. 474, 488 (1951), the substantial evidence standard does not allow a court to conduct a *de novo* investigation of the evidence on the record before it and reach an independent conclusion; rather, the court's review is limited to deciding whether there is sufficient evidence in the record considered as a whole to support the agency's findings. The mere fact that a reasonable person might reach some other conclusion is insufficient for this court to overturn the agency's conclusion. See *SSIH Equipment S.A. v. U.S. International Trade Commission*, 718 F.2d 365, 381, 218 USPQ 678, 691 (Fed. Cir. 1983) (additional views of Judge Nies).

The ALJ concluded, after extensive analysis, that the claimed invention of the Blades '756 patent was not anticipated by prior art, including the Morgan '645 patent. He noted that, while the Morgan '645 patent teaches the use of an airgap, the use of airgap in and of itself does not guarantee an improved fiber. This was obvious from Blades' early work. The ALJ also found that sulfuric acid in any concentration was not disclosed as a solvent in the Morgan '645 patent; or did that patent disclose PPD-T in its optically anisotropic state. Moreover, the ALJ found that the Morgan '645 patent was not an enabling disclosure with regard to the claimed spinning dope. Neither the 18% concentration of PPD-T nor the heating of the dope to achieve this concentration was disclosed in the Morgan '645 patent. The ALJ also rejected appellants' arguments that the

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Blades process was anticipated by the Hill and Smith patents which were referenced in the Morgan '645 patent. This would have required Blades randomly to pick and choose among a number of different polyamides, a plurality of solvents, and a range of inherent viscosities. The ALJ rejected such "random picking and choosing" of prior art, relying on *In re Arkley*, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972), and concluded in effect that the anticipatory reference must disclose in the prior art a thing substantially identical with the claimed invention. In a somewhat more limited consideration -- restricted to the concentration of sulfuric acid in the

Blades patent -- the Commission itself reached the same result.

Accordingly, we hold that there is substantial evidence in the record as a whole to sustain the Commission's (including the ALJ's) findings that the Blades process was not anticipated by any prior art. 13

Appellants say, as an alternative to their §102 argument, that the trial tribunal erred when it failed to find that the Blades '756 patent would have been obvious under 35 U.S.C. §103 in view of the Morgan '645 and Kwolek '542 patents. It is now established that obviousness is a question of law based on factual inquiries which include:

- (1) the scope and content of the prior art;
- (2) the difference between prior art and the claims at stake;
- (3) the level of ordinary skill in the art; and
- (4) objective evidence of nonobviousness (secondary factors).

Such objective indications as commercial success and long-felt but unresolved needs, failure of others, copying, and unexpected results are relevant facts relating to the issue of validity. *See, e.g., In re DeBlauwe*, 736 F.2d 699, 222 USPQ 191 (Fed. Cir. 1984) (obviousness a question of law to be determined on the facts). Since obviousness is a question of law, we are not bound by the Commission's ultimate determination on the matter of §103 obviousness. *See Corning Glass Works v. U.S. International Trade Commission*, 799 F.2d 1559, 1565 & n.5, 230 USPQ 822, 826 & n.5 (Fed. Cir. 1986).

In the proceedings before the Commission, Du Pont premised its defense of nonobviousness on the basis that the prior art -- mainly that the Morgan '645 patent and the Kwolek '542 patent -- actually led away rather than toward the Blades process. The Commission found Du Pont's expert witness' testimony to be compelling. That witness, Dr. Uhlmann, explained why the Morgan '645 patent, when considered with other prior art references, including the Kwolek '542, Bair '941, and Cipriani '793 patents, would not have rendered the invention of Blades '756 patent obvious. The Kwolek '542 patent calls for conventional wet or dry spinning and calls for concentrations of PPD-T far lower than required by the Blades process. The Bair '941 patent does not disclose heating sulfuric acid with PPD-T to achieve an anisotropic solution. While the Morgan '745 patent discloses air-gap spinning, its emphasis is on meta-oriented polymers. Based on these differences, Dr. Uhlmann concluded that one skilled in the art would *not* combine them or be led to the Blades invention.

As the ALJ recognized, prior art references before the tribunal must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock*, 721 F.2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Moreover, appellants cannot pick and choose among individual parts of assorted prior art references "as a mosaic to recreate a facsimile of the claimed invention." 721 F.2d at 1552, 220 USPQ at 312. In this case, the ALJ found that

Akzo's expert witnesses could not show how the prior art patents could be brought together to render the Blades '756 invention obvious without reconstructing the teachings of those patents assisted by hindsight.

The secondary considerations also compelled the Commission to make a finding of nonobviousness. The commercial success of Du Pont's Kevlar patent has been enormous and its range of uses substantial. Du Pont is still developing commercial applications for Kevlar, having spent significant amounts of money in developing both new uses and new markets for the product. Commercial success is, of course, a strong factor favoring non-obviousness. *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 F.2d 1573, 1575-76, 222 USPQ 774, 777, (Fed. Cir. 1984), *cert. denied*, 471 U.S. 1065 (1985). Moreover, as the ALJ noted, Blades solved a problem that Du Pont research scientists had

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been tackling for years. The Blades process represents a solution to a long-felt need and practitioners in the field immediately recognized that that process was a remarkable advancement in polymer spinning technology. Indeed, as brought out in this appeal, even one of Akzo's scientific reports repeatedly expressed concern for degradation of PPD-T and amazement at the disclosure of the Blades '756 process.

We agree, therefore, with the Commission's determination that the Blades '756 patent is not invalid for anticipation or obviousness.

C. *Alleged inequitable conduct before the Patent and Trademark Office (PTO)*. Appellants urge that Du Pont misled the patent examiner in two respects: first, that Du Pont submitted an affidavit to overcome the examiner's obviousness objections that failed to compare the Blades process with the closest prior art; and, second, that Du Pont persistently argued that the Morgan '645 patent and the Kwolek '542 patent did not anticipate the Blades patent.

In *J.P. Stevens & Co. v. Lex Tex Ltd.*, 747 F.2d 1553, 223 USPQ 1089 (Fed. Cir. 1984), *cert. denied*, 106 S. Ct. 73 (1985), this court articulated a two-prong test for establishing inequitable conduct before the PTO. To render a patent unenforceable, the proponent of the inequitable conduct must first establish by clear and convincing evidence that there was a material misrepresentation or omission of information, and then establish a threshold level of intent on the part of the applicant. *See also Atlas Powder Co. v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1577-78, 224 USPQ 409, 414-15 (Fed. Cir. 1984).

Our major standard for materiality is whether a reasonable examiner would consider the omission or misrepresentation important in deciding whether to issue the patent. 14 Materiality and intent must also be considered together: the more material the omission or misrepresentation, the less intent that must be shown to reach a conclusion of inequitable conduct. *American Hoist & Derrick Co. v. Sowa & Sons*, 725 F.2d 1350, 1363, 220 USPQ 763, 773 (Fed. Cir.), *cert. denied*, 469 U.S. 821, 224 USPQ 520 (1984).

We uphold the Commission's findings and conclusion that Du Pont's affidavit or arguments before the examiner did not constitute material misrepresentation. As Akzo concedes, the examiner had both the Morgan '645 patent and the Kwolek '542 patents before him throughout the examination process. It was on the basis of these two patents that Du Pont's first three applications were rejected. The mere fact that Du Pont attempted to distinguish the Blades process from the prior art does not constitute a material omission or misrepresentation. The examiner was free to reach his own conclusion regarding the Blades process based on the art in front of him. Nor does Du Pont's affidavit, advocating a particular interpretation of the Morgan '645 and Kwolek '542 patents (albeit favorable to Du Pont's position), show any intent to mislead the PTO. Du Pont's intent was not to mislead, but rather to distinguish prior art from the Blades process and demonstrate to the examiner that the Blades process and demonstrate to the examiner that the Blades process would not have been obvious in light of Morgan '645 and Kwolek '542. The sum of it is that, because we cannot see either a proved material misrepresentation or a proved intent to mislead, we must conclude that Akzo has not met its burden of proving inequitable conduct before the PTO.

### **III. *Due Process and Treaty Rights***

A. *Due Process*. This aspect of the appeal concerns the Commission's procedures with respect to the private parties' confidential information. On May 21, 1984, the ALJ issued an administrative protective order pertaining to confidential business information, as defined in the Commission's Rules, 19 C.F.R. §210.30(d)(7) (1976), that would be produced during the discovery phase of the investigation.

In general, this order permitted access to all such confidential information by Akzo's and Du Pont's outside counsel but not by management personnel or in-house counsel of either private company. At a preliminary conference held June 22, 1984, Akzo made the first of three unsuccessful attempts to modify the protective order. Arguing that there was a substantial overlap between the Commission's investigation and an action brought by Akzo against Du Pont then (and still) pending in the United States District Court for the District of Delaware, Akzo moved to align the protective orders by modifying the ALJ's protective order so that its terms coincided with those of a protective order earlier issued by the District Court in the Delaware action. The ALJ denied Akzo's motion on July 6, 1984.

By letter dated June 27, 1984, Akzo requested that the protective order be amended

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to include three designated members of Akzo's in-house counsel. On July 6, 1984, the ALJ concluded that Akzo failed to demonstrate the requisite need to warrant granting Akzo's in-house counsel access to Du Pont's confidential business information. Akzo renewed its motion to modify the protective order on February 8, 1985, this time urging that both Akzo's in-house counsel and the general manager of Akzo's Industrial Fiber Group should be granted limited access to Du Pont's confidential business information. Because Akzo failed (in the ALJ's view)

to demonstrate a need for either its in-house counsel or its general manager to have access to the requested confidential material, the ALJ denied Akzo's motion on February 21, 1985.

Akzo now contends that the protective order, issued by the ALJ on May 21, 1984, effectively deprived it of its rights to confrontation, to rebuttal, and to effective assistance of counsel. According to Akzo, under the terms of the protective order, the parties' designation of materials as confidential had the effect of "unilaterally immunizing them from scrutiny by the opposing party." Moreover, Akzo maintains that the system established by the protective order completely denied Akzo "access to all of the critical evidence on which the decision against it was based."

[2] Our examination of the challenged protective order, as it was enforced, shows Akzo's charges to be groundless. The protective order provides, *inter alia*, that confidential business information "shall be disclosed at any hearing only *in camera* before the commission or the administrative law judge." Although the protective order enabled either party to designate business information as confidential, such a designation did not "unilaterally immunize" purportedly confidential documents from scrutiny by the opposing party. In the first place, all the protected information was freely available to outside counsel who could fully consider it, although they were not free to show or repeat it to Akzo's management or in-house counsel. Second, paragraph 10 of the protective order provided a mechanism by which either party was free to object to its adversary's designations at any stage of the proceeding. According to paragraph 10, if either party disagreed with respect to the designation of business material as confidential, that party "shall confer [with the supplier] as to the status of the subject information proffered within the context of this order." In the event that the parties failed within 10 days to reach agreement as to the proper status of the information, the protective order provided that either party could submit the issue to the ALJ or the Commission for resolution. The mechanism of paragraph 10 could also be used to permit disclosure to particular persons of otherwise classified material. Although, as mentioned earlier, Akzo attempted to modify the protective order on three separate occasions, Akzo never invoked the dispute resolution procedures of paragraph 10 to challenge Du Pont's characterization of business information as confidential or as not disclosable to particular individuals. Third, the protective order expressly permitted other exceptions to be made by the ALJ or the Commission.

In denying Akzo's various motions to amend the protective order, the ALJ relied on the Commission's decision in *Certain Rotary Wheel Printers*, Inv. No. 337-TA-145, 5 ITRD 1933 (Nov. 4, 1983). According to *Rotary Wheel Printers*:

rotection of confidential information is crucial to the Commission's ability to carry out its statutory responsibilities. In addition, review after discovery and the evidentiary hearing are completed would provide an inadequate remedy. The inappropriate release of confidential information can never be fully remedied.

The Commission has traditionally been reluctant to release confidential information where not absolutely necessary.

5 ITRD at 1935.

Thus, implicit in Akzo's due process attack on the protective order is the position that, in the interests of fundamental fairness, it was "absolutely necessary" for Akzo's in-house counsel and general manager to have access to Du Pont's confidential business information. However, "[i]n section 337 investigations, it is the exception rather than the rule to release confidential information to in-house counsel." *Id.*

The primary justification for the Commission's reluctance to grant adversary management and in-house counsel access to confidential business information is that, in order to discharge its statutory responsibilities within the strict statutory time limits, the Commission is heavily dependent on the voluntary submission of information. Disclosure of sensitive materials to an adversary would undoubtedly have a chilling effect on the parties' willingness to provide the confidential information essential to the Commission's fact-finding processes. the Commission has resolved the difficult and controversial question of the role of in-house counsel by taking a conservative position on the side of optimum shielding of business

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information. Obviously, where confidential material is disclosed to an employee of a competitor, the risk of the competitor's obtaining an unfair business advantage may be substantially increased. This general Commission position is neither unreasonable nor arbitrary. It represents an appropriate balancing between the needs demanded by the Commission's process and the parties' need for participation by its in-house personnel.

This is especially true because there is no *per se* rule against disclosure to either a competitor's in-house counsel or management representative. *Rotary Wheel Printers* established, and the ALJ employed, a three-part balancing test to determine whether, to whom, and under what conditions to release confidential information. Factors to be considered include the party's need for the confidential information sought in order to adequately prepare its case, the harm that disclosure would cause the party submitting the information, and the forum's interest in maintaining the confidentiality of the information sought. 5 ITRD at 1937.

After reviewing the record, the ALJ concluded that Akzo failed to demonstrate clearly a need for granting access to confidential business information to either Akzo's in-house counsel or key management officials. The ALJ also found that disclosure would cause substantial harm to Du Pont's competitive position. These particular rulings cannot be faulted. The court understands that all information relating to patent validity and enforceability ( *see* Part II, *supra* ) was promptly made fully available to all. As for the information bearing on the important question of whether Akzo's importation of aramid fibers would tend to destroy or substantially injure Du Pont's business ( *see* Part IV, *infra* ), it is obvious that that confidential information -- relating to Du Pont's business, activities, plans and expectations -- should not be made available (unless, perhaps, where absolutely necessary for a fair hearing) to a direct competitor like Akzo. That such full access was not absolutely necessary to appellants' making of their own case is shown by

the crucial fact that Akzo was at all times perfectly free to offer its own market projections as well as to reveal its own activities, forecasts, and interpretations. Both sides could present to the Commission their own information on those matters without knowing those of the other side's.

Akzo argues, however, that the denial of its motions to modify the protective order effectively denied its due process right to participate in its own defense. The contention is that Akzo was subjected to serious adverse governmental action on the basis of evidence which Akzo was never permitted to know and "personally" refute. In support of this position, Akzo invokes §555(b) of the Administrative Procedure Act which was made applicable to §337 proceedings by the 1974 Amendments to the Tariff Act of 1930. Under §555(b), "[a] party is entitled to appear in person or by or with counsel or other duly qualified representative in an agency proceeding." 5 U.S.C. §555(b). However, Akzo was represented by competent and experienced outside counsel throughout the proceedings; these counsel were aware of all confidential information. Further, Akzo fails to recognize that "the affirmative grant of the right to appear apparently bestowed by Section 555(b) is not blindly absolute, without regard to the status or nature of the proceedings and concern for the orderly conduct of public business." *DeVyver v. Warden, U.S. Penitentiary*, 388 F.Supp. 1213, 1222 (M.D. Pa. 1974) citing *Easton Utilities Commission v. Atomic Energy Commission*, 424 F.2d 847, 852 (D.C. Cir. 1970). Whatever else §555(b) guarantees to parties to an administrative proceeding under §337, it does not mandate disclosure of significant confidential information to in-house counsel and corporate executives of a business competitor -- where that information is fully available to outside counsel. Akzo's contention withers in the face of unrefuted evidence that more than 90 people representing Akzo, including numerous expert witnesses and members of the battery of four law firms comprising Akzo's defense team, had unrestricted access to Du Pont's confidential information.

Akzo has also failed to demonstrate that it suffered actual harm under the confidentiality procedures instituted by the ALJ. Although Akzo's insiders were denied access to Du Pont's economic and market forecasts with respect to the production and sale of aramid fibers, Akzo was not prevented (as we have pointed out) from offering its own projections into evidence under the cover of confidentiality. It is difficult to see how Akzo was prejudiced.

Finally, we have neither found nor been directed to any judicial decision in this country mandating, in the circumstances present here, that business confidential information *must* be made to inside management. On the contrary, we are aware, from the practice of our own court, that records in appeals to us are frequently classified in large part, and are presumably not available to the management of the opposing party. Moreover, there are a substantial number of decisions upholding

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confidentiality comparable to that accepted by the Commission. Akzo tells us that most of these involved only pretrial discovery (and not evidence at a hearing or trial) and that the others are also distinguishable. We do not stop to examine these arguments because, at the least, these decisions (a) show that there is no holding to the contrary of the one we now make and (b)

strongly suggest the validity of carefully tailored protective orders allowing exceptions to be made if adequate proof is made. 15

B. *Treaty rights* . As an alternate ground for reversal, Akzo argues that, because the proceedings below discriminated against Akzo on the basis of its Dutch nationality, they violate United States treaty obligations. We disagree with Akzo's premise that there was discrimination here. Essentially, Akzo employs a *non sequitur* to support its position. The core of Akzo's claim is that it was denied the rights that would have been afforded a domestic firm sued for patent infringement in a district court. According to Akzo, this "inferior treatment" by the Commission constitutes discrimination on the basis of nationality. That analysis misses the mark. The appropriate inquiry is whether Akzo was afforded the same rights afforded to domestic firms in a §337 proceeding before the Commission . Clearly, Akzo has failed to demonstrate that it suffered from discriminatory treatment. First, under the express terms of the protective order, both Akzo and Du Pont were bound by identical procedures regarding confidentiality and discovery. Neither party was allowed access to the other party's confidential business information. Second, the same argument was rejected in *Certain Spring Assemblies and Components Thereof*, Inv. No. 337-TA-88, 216 USPQ 225 , *aff'd sub nom. General Motors Corp. v. U.S. International Trade Commission* , 687 F.2d 476, 215 USPQ 484 (CCPA 1982), *cert. denied* , 459 U.S. 1105 (1983). In that case, respondent unsuccessfully raised certain U.S.-Canadian treaties as a defense to enforcement of §337. The Commission observed:

Section 337 does not discriminate against foreign corporations by virtue of their foreign status. It applies to foreign and domestic corporations alike. Section 337 gives the Commission jurisdiction over products imported from a foreign country, *even if they are manufactured and/or imported by a U.S. corporation* . The Commission's jurisdiction lies in unfair acts occurring in connection with the importation of goods into the United States or their sale, and it extends to all persons engaged in such unfair acts.

216 USPQ at 231 (emphasis added).

#### IV. Other Issues

In this part we consider four separate issues raised by appellants: (1) whether the Commission properly found that continued importation of Akzo's product would substantially injure or tend to injure Du Pont; (2) whether adjudication of §337 actions by a non-Article III tribunal is unlawful; (3) whether Du Pont's pricing practices (with respect to its aramid products) violate the antitrust laws; and (4) whether Du Pont committed inequitable conduct by infringing Akzo's own patent.

A. *Tendency to destroy or substantially injure* . The ALJ concluded (and we have upheld) that Akzo violated §337(a) by the unlawful importation or sale of certain aramid fibers produced in the Netherlands by means of a process which if practiced in the United States would infringe the Blades '756 patent. Such acts, long considered to be violative of §337, clearly constitute unfair acts for the purposes of the statute. *See, e.g., In re Chain Door Locks* , USITC Pub. No. 770 (Apr. 1976), 191 USPQ 272 (USITC 1976); *In re Von Clemm* , 229 F.2d 441, 108 USPQ 371 (CCPA 1955); *In re Amtorg Trading Corp.* , 75 F.2d 826, 24 USPQ 315 (CCPA), *cert.*

*denied* , 296 U.S. 576 (1935).

However, unfair acts, without more, are legally insufficient to support a finding of a §337 violation. That provision declares unlawful "[u]nfair methods of competition and unfair acts in the importation of articles . . . , the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States." Thus, to prove a violation of §337, the complainant must show both an unfair act and a resulting detrimental effect or tendency. *New England Butt Co. v. U.S. International Trade Commission* , 756 F.2d 874, 876, 225 USPQ 260, 261 (Fed. Cir. 1985). As this court recently held in *Textron, Inc. v. U.S. International Trade Commission* , 753 F.2d 1019, 224 USPQ 625 (Fed. Cir. 1985), "section 337 has consistently

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been interpreted to contain a distinct injury requirement of independent proof." 753 F.2d at 1028, 224 USPQ at 631 (citations omitted); *accord*, *Corning Glass Works v. U.S. International Trade Commission* , 799 F.2d 1559, 230 USPQ 822 (Fed. Cir. 1986); *Warner Brothers, Inc. v. U.S. International Trade Commission* , 787 F.2d 562, 564, 229 USPQ 126, 127 (Fed. Cir. 1986).

According to *Textron* , "Congress may well have included this separate requirement . . . to insure that the extreme and internationally provocative remedy contemplated [by §337] -- exclusion of imports from particular countries -- would be implemented only when this is compelled by strong economic reasons." 753 F.2d at 1028-29, 224 USPQ at 631 (citations omitted). It follows that the mere concurrence of an unfair act and some resulting injury is not necessarily sufficient, in itself, to establish a violation of §337. "Congress has directed that the remedy of section 337, involving as it does the act of the sovereign in closing our borders to certain imports, be exercised only in those instances where at least there is proof of a tendency to *substantially injure* the subject industry." *Corning Glass Works v. U.S. International Trade Commission* , 799 F.2d 1559, 1567, 230 USPQ 822, 827 (Fed. Cir. 1986) (emphasis in original).

Not only is an injury determination intimately wed to the particular facts of each case, but also the determination of injury is precisely the type of question which Congress has committed to the expertise of the Commission. Thus, on appeal, our review of an injury determination is limited to deciding whether the Commission's decision is supported by substantial evidence. 19 U.S.C. §1337(c) (1982); 5 U.S.C. §706 (1982); *SSIH Equipment S.A. v. U.S. International Trade Commission* , 718 F.2d 365, 371, 218 USPQ 678, 684 (Fed. Cir. 1983); *General Motors Corp. v. U.S. International Trade Commission* , 687 F.2d 476, 215 USPQ 484 (CCPA 1982), *cert. denied* , 459 U.S. 1105 (1983). In other words, we must decide "whether substantial evidence supports the facts relied on and whether the Commissioner's [sic] determination, on the record, is arbitrary, capricious, or an abuse of discretion." *Corning Glass Works* , 799 F.2d at 1568, 230 USPQ at 828. As we noted in *Corning Glass Works* , "the question of quantum of injury is not one on which it would be appropriate for this court to put forth a legal standard." *Id.* Nor are we allowed to substitute our own judgment for that of the Commission. *Citizens to Preserve Overton Park v. Volpe* , 401 U.S. 402, 416 (1971). Of course, a decision is supported by

substantial evidence if it is supported by "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938).

Our review of the record in this case compels the conclusion that the Commission's determination -- that Akzo's unfair imports of aramid fibers will have a tendency to injure Du Pont substantially -- is supported by substantial evidence. The Commission based its injury determination on a prediction of the future effect of Akzo's unfair imports on the domestic industry. There is substantial support for this determination. The record reflects Akzo's intent and capacity to enter the United States aramid fibers market, Du Pont's resulting loss of revenue, and a probable price reduction by Du Pont in response to Akzo's entry into the United States market. Nonetheless, Akzo urges this court to overturn the Commission's exclusion order and deny relief to Du Pont. Akzo first contends that its projected share of the U.S. market during the remaining life of the '756 patent is *de minimis*. It would be both unwise and improper for this court to establish some arbitrary market-share benchmark as a prerequisite to a finding of a §337 violation and we decline to do so. It is sufficient that the record supports the Commission's conclusion that, upon entry into the U.S. market, Akzo will capture a significant share of the domestic market, if not in relative percentage figures than certainly in absolute dollar figures.

[3] Second, Akzo maintains that, notwithstanding its entry into the market, Du Pont's aramid fibers sales volume, revenues and profits will all increase during the remaining life of the patent. But Akzo mischaracterizes the proper standard for measuring injury. The issue is not whether Du Pont's sales, revenues and profits will increase beyond their 1985 levels but rather whether Akzo's presence in the market will substantially injure Du Pont's business during the 1986 - 1990 period (the remaining life of the Blades '756 patent).

As Du Pont correctly points out, nothing in §337 requires a showing that the domestic industry will be utterly deprived of profitability. "Where the unfair practice is the importation of products that infringe a domestic industry's . . . patent right, even a relatively small loss of sales may establish, under section 337(a), the requisite injury . . . ." *Bally/Midway Mfg. Co. v. U.S. International Trade Commission*, 714 F.2d 1117, 1124, 219 USPQ 97, 102 (Fed. Cir. 1983). This proposition is entirely consistent with the legislative history of §337. In a House

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Report discussing the application of §337 to unfair competition involving patent infringement, Congress stated: "Where unfair methods and acts have resulted in *conceivable losses of sales*, a tendency to substantially injure such industry has been established." See House Comm. on Ways and Means, Trade Reform Act of 1973, H.R. Rep. No. 571, 93d Cong. 1st Sess. 78 (1973) (emphasis added); accord *In re Von Clemm*, 229 F.2d 441, 445, 108 USPQ 371, 374 (CCPA 1955).

Because substantial evidence supports the facts relied upon by the Commission in making its determination that Akzo's unfair imports would tend to injure Du Pont substantially, we must

affirm its injury determination. Akzo has failed to demonstrate that the commission's determination is arbitrary, capricious, or an abuse of discretion.

A contrary result would emasculate the protections of §337 with respect to high technology ventures. Typically, in high technology industries, acute competition forces competitors to commit substantial resources to research and development in hopes of generating profits before either their patents expire or before technological advance makes the products obsolete. Thus, innovators frequently resign themselves to losses during the early life of their patents with the expectation that, if product development and marketing efforts are successful, profits earned during the later life of other patents will provide sufficient compensation for their endeavors.

On this record, Du Pont's aramid fibers industry can be said to furnish a classic illustration. Although Du Pont has undertaken extensive product development and marketing efforts since 1973, the company had not earned any return on its investment through 1984. Du Pont anticipates that it will realize its first positive net operating earnings from its aramid fibers production in 1985.

In reaching its injury determination, the Commission permissibly recognized that the aramid fibers industry is in transition from a period requiring extremely high investment of resources to a period when the industry will finally realize a return on that investment. In these circumstances, diminished profits, lower return on investment, and reduced sales are all indicative of substantial injury.

[4] *B. Adjudication of §337 actions by a non-Article III tribunal* . Apparently employing the "kitchen sink" or "let's try anything" approach to appellate advocacy, Akzo raises an additional challenge to the Commission's proceedings. Relying primarily on *Northern Pipeline Construction Co. v. Marathon Pipe Line Co.*, 458 U.S. 50 (1982), Akzo characterizes the current §337 proceedings as "inherently judicial" involving "essentially private rights" and concludes that the Constitution requires adjudication of §337 issues by Article III courts. Both Akzo's premise and conclusion are flawed. Although it is true that private rights may be affected by §337 determinations, the thrust of the statute is directed toward the protection of the public interest from unfair trade practices in international commerce. As this court recognized in *Young Engineers, Inc. v. U.S. International Trade Commission*, 721 F.2d 1305, 1315, 219 USPQ 1142, 1152 (Fed. Cir. 1983), a §337 proceeding "is not purely private litigation 'between the parties' but rather is an 'investigation' by the Government into unfair methods of competition or unfair acts in the importation of articles into the United States." Moreover, "[t]he power to regulate commerce with foreign nations is expressly conferred upon Congress, and being an enumerated power is complete in itself, acknowledging no limitations other than those prescribed in the Constitution." *Buttfield v. Stranahan*, 192 U.S. 470, 492 (1904). Properly viewed, §337 and its predecessor provisions represent a valid delegation of this broad Congressional power for the public purpose of providing an adequate remedy for domestic industries against unfair practices beginning abroad and culminating in importation. *Sealed Air Corp. v. U.S. International Trade Commission*, 645 F.2d 976, 985-86, 209 USPQ 469, 478 (CCPA 1981).

*C. Du Pont's pricing practices* . Under Du Pont's value-in-use pricing program, the price at

which Du Pont sells aramid fibers varies in accordance with the particular end-use to which the purchaser puts the product. Although Du Pont's customers may use the aramid fibers for whatever purpose they desire, they are required to pay Du Pont the price appropriate to the ultimate end-use. To that objective, Du Pont requires its customers to agree that they will use the aramid fibers for the specific end-use for which they are purchased or, if the aramid fibers are put to a different end-use or are resold, that they will pay Du Pont an amount representing the difference between the initial purchase price and the price for the ultimate end-use.

According to Akzo, each such agreement constitutes a "contract . . . in restraint of trade," and the entire pattern of agreements, policing and surveillance constitutes a "combination . . . in restraint of trade" within the

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meaning of §1 of the Sherman Act. Although the Commission specifically found that "the adoption of Du Pont's value-in-use pricing strategy reflects price competition with other substitute products for various end uses," Akzo continues to argue that Du Pont's value-in-use pricing for aramid fibers violates the antitrust laws.

Plainly, value-in-use pricing is not *per se* an anticompetitive restraint on trade within the meaning of the antitrust laws. In *Carter-Wallace, Inc. v. United States*, 449 F.2d 1374, 171 USPQ 359 (Ct. Cl. 1971), one of this court's predecessor courts sustained against an antitrust challenge a pricing system in which purchasers paid a lower price for the drug meprobamate when used in certain combination drugs. The court noted that "the vendee firms, if one looks at their business as a whole, are not prohibited or deterred from making any use they wish of the meprobamate." *Id.* at 1379, 171 USPQ at 362. Moreover, "[i]t is even reasonable to assume, nothing else appearing, that if the vendees change their minds after purchasing the drug at the lower price they can make unrestricted use of it by paying the difference between that lower price and the consent-decree price." *Id.* at 1379 n.4, 171 USPQ at 362 n.4.

Similarly, under Du Pont's value-in-use pricing system, its customers may use their aramid fibers for whatever purpose they desire, including resale, providing they pay Du Pont the price appropriate to the ultimate end-use. Contrary to Akzo's position that Du Pont's pricing system is anticompetitive and an unreasonable restriction on use and resale, the Commission found and the record establishes that Du Pont's value-in-use pricing has the procompetitive effect of increasing the volume of aramid fibers that are sold.

Akzo also claims that the ALJ erred in not making specific findings on market definition. But, as this court recently observed, the trier of fact need not engage in the meaningless exercise of market definition where no wrongful conduct has been shown. *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 875, 228 USPQ 90, 100 (Fed. Cir. 1985). Equally groundless is Akzo's contention that the ALJ erred by not shifting to Du Pont the burden of demonstrating that its pricing policies had procompetitive effects. The Supreme Court, in *National Collegiate Athletic Ass'n v. Board of Regents*, 468 U.S. 895 (1984), made abundantly clear that the burden of proof

shifts only where the evidence shows that the challenged practice has the "hallmarks of anticompetitive behavior," namely, that "it has operated to raise prices and reduce output." *Id.* at 113. Conversely, in this case, the evidence establishes and the Commission found that the alleged "restraint," value-in-use pricing, results in reduced prices and increased output.

D. *Du Pont's alleged inequitable conduct in manufacture* . During the proceedings below, Akzo asserted that Du Pont infringed Akzo's U.S. patent 4,308,374 ('374) patent) on a polymerization solvent system used in the formulation of the polymer which is spun into aramid fibers by means of the Blades '756 process. Notwithstanding §337(c) of the Tariff Act of 1930 which provides that "[a]ll legal and equitable defenses may be presented," the ALJ struck Akzo's equitable defense and refused to hear the underlying evidence. On appeal, Akzo contends that the ALJ thus denied Akzo the opportunity to establish a meritorious defense to Du Pont's §337 claim. For two reasons we disagree that this defense was meritorious.

Our conclusion is first supported by the recent decision of the District Court for the Eastern District of Virginia holding the '374 patent invalid for obviousness under 35 U.S.C. §103. *Akzo N.V. v. E.I. DuPont de Nemours & Co.*, Civil Action No. 85-0459-R (E.D. Va. April 24, 1986), on appeal to this court, No. 86-1327/1358. 16 Under that decision, Akzo's infringement claim has been adversely decided and Du Pont has a legal right to do the act claimed to be infringing. Consequently, there is as yet no legitimate basis for Akzo's equitable defense. *See Young Engineers, Inc. v. U.S. International Trade Commission*, 721 F.2d 1305, 1315-16, 219 USPQ 1142, 1152 (Fed. Cir. 1983). Second, this same result is compelled in this instance by this court's decision in *SSIH Equipment S.A. v. U.S. International Trade Commission*, 718 F.2d 365, 218 USPQ 678 (Fed. Cir. 1983). In *SSIH*, we held that allegedly "inequitable conduct" is not a defense to a §337 action where the conduct occurred after issuance of the complainant's patent and involved a different patent. *Id.* at 378-79, 218 USPQ at 689-90. In this case, Du Pont's '756 patent was issued in 1973 and pertains to a spinning process; Akzo's '374 patent was issued in 1981 and pertains to a polymerization process.

### **Conclusion**

For these reasons, we affirm the Commission's exclusion order prohibiting the importation

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into the United States of aramid fibers manufactured by Akzo in the Netherlands.

**AFFIRMED .**

### **Footnotes**

Footnote 1. U.S.C. §1337 (1976) provides in pertinent part:

Unfair practices in import trade

(a) Unfair methods of competition declared unlawful

Unfair methods of competition and unfair acts in the importation of articles into the United States, or in their sale by the owner, importer, consignee, or agent of either, the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States, or to prevent the establishment of such an industry, or to restrain or monopolize trade and commerce in the United States, are declared unlawful, and when found by the Commission to exist shall be dealt with, in addition to any other provisions of law, as provided in this section.

Footnote 2. As indicated in Part II, *infra*, aramid fibers are the strongest commercial synthetic fibers known to man -- about five times stronger than steel on an equal weight basis.

Footnote 3. Akzo presents no contention that, if claim 13 of the '756 patent is valid and enforceable, Akzo would not infringe if it used its same process in this country.

Footnote 4. C.F.R. §210.53(h)(1986) provides that "[a]n initial determination . . . shall become the determination of the Commission . . . unless the Commission . . . shall have ordered review of the initial determination or certain issues therein . . . ." In accepting the necessary conclusions of the ALJ we do not hold that the Commission must have concurred with each and every individual factual finding of the ALJ to support its conclusion.

Footnote 5. Our recitation of the facts follows the ALJ's and the Commission's findings which are supported by at least substantial evidence. *See Surface Technology, Inc. v. U.S. International Trade Commission*, 801 F.2d 1336, 1340, 231 USPQ 192, 195 (Fed. Cir. 1986).

Footnote 6. Polyamides are polymers containing amide linkages. Aromatic polymers are polyamides where the radicals linking the amide linkages constitute aromatic radicals. The polymer described in claim 13 of the Blades '756 patent is a wholly aromatic para-positioned polyamide.

Footnote 7. Dry spinning can be contrasted with wet spinning where the spinneret is placed directly into the spinning dope. Wet spinning is the process used to make a number of synthetic fibers including rayon and nylon.

Footnote 8. Inherent viscosity

( $\eta_{inh}$ ) is a measure of viscosity used in polymer chemistry.

$$\eta_{inh} = \ln \eta_r / c \quad \text{where } \eta_r = \eta / \eta_0 = \frac{\text{solution viscosity}}{\text{solvent viscosity}}$$

measured at the same temperature.

Footnote 9. An anisotropic solution exhibits optical birefringence (i.e., the liquid crystalline solution refracts light in two directions). This characteristic imparts a high degree of orientation to the spun fibers yielding a stiffer and stronger end product without requiring post-coagulation drawing as is required in other man-made fibers such as nylon and rayon.

Footnote 10. Claim 13 reads as follows:

A method comprising extruding a spinning dope from an orifice through a layer of gas and into an aqueous bath at a temperature of under 50°C said dope comprising a polyamide and a solvent of sulfuric acid of at least 98% concentration at a concentration of at least 40 grams of said polyamide per 100 ml. of solvent, said polyamide having an inherent viscosity of at least 3.0 and being poly(p-phenylene terephthalamide).

Footnote 11. An " *ipsissimis verbis* " test requires the same terminology in the prior art in order to find anticipation.

Footnote 12. The Commission made specific findings on the skill of the art. It concluded that the skill in the art was high -- that of a doctorate or post-doctorate in chemistry.

Footnote 13. Appellants cite this court's opinion in *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782, 227 USPQ 773, 778-79 (Fed. Cir. 1985), as supporting their contention that the Blades '756 patent was anticipated by the prior art. *Titanium Metals* is easily distinguishable from this case. There, a single reference disclosed a range of alloys including that claimed by appellant. In this case, the Commission found that neither the Morgan '645 patent nor any other prior art reference disclosed the Blades '756 process.

Footnote 14. This standard is identical to the PTO standard of materiality. 37 C.F.R. §1.56(a).

Footnote 15. This case differs from *Viscofan S.A. v. U.S. International Trade Commission*, 787 F.2d 544, 552, 229 USPQ 118, 124 (Fed. Cir. 1986), because here (but not in *Viscofan*) the confidentiality problem was directly related to the propriety of the exclusion order. Accordingly, we have reviewed the merits of the confidentiality actions. See *American Telephone and Telegraph Co. v. U.S. International Trade Commission*, 626 F.2d 841, 842, 206 USPQ 111, 112 (CCPA 1980).

Footnote 16. That appeal was argued on November 7, 1986 before the same panel of judges as heard the current appeal.

**- End of Case -**